

NEMOPHILA

Meeting and Field Guide

CALIFORNIA BOTANICAL SOCIETY

MAY 11, 1920

NUMBER 8

The purpose of the Society is to promote the botanical study and investigation of California plants, to diffuse knowledge concerning them, and by lectures, field-trips, exhibitions and publications to deepen interest in the native flora amongst the people of California.

FIELD TRIPS AND MEETINGS.

Saturday, May 15, 8 o'clock. Regular Meeting, Room 113, Agricultural Hall, University of California, Berkeley. Lecture by Dr. H. J. Webber, Director of Agricultural Experiment Stations, University of California, on "The Breeding and Improvement of Wild Plants."

Sunday, May 23. Trampas Cañon and Ridge. *Calochortus albus*, *Papaver heterophyllum*. Take Key Route train from San Francisco, 8:00 a. m., or at 40th and Shafter, Oakland, 8:30 a. m., to Moraga Club House Station. Ten miles. Leader, Miss Amy Rinehart.

Saturday-Sunday-Monday, May 29-30-31. Camping trip to Santa Cruz Mountains. Camp site at Lindsay Farm, one and one-half miles from Wrights. Bring sleeping bags and individual mess equipment (tin plate, knife, fork, spoon); also lunch for Saturday. For the remainder of the period the committee will furnish provisions. First day, neighborhood of camp. Second day, exploration of crater with interesting flora, about 5 miles from camp. Third day, spend with "The Walker's" Sycamore Farm, Los Gatos. Leave San Francisco, foot of Market St. by Southern Pacific, Sat., May 29, 8:00 a.m. or 1st and Broadway, Oakland, 8:50 a.m. Reach Wrights, 11:32 a.m. Return Mon., May 31, 7:40 p.m. Possibility of special week-end round-trip rates from San Francisco or Oakland. One way fare, \$2.11. Those wishing to take the trip please notify the Secretary, Miss Ehlers, 2613 Durant Ave., Berkeley (Phone Berk. 3699), before May 20. Leaders, Miss Hazella Lindsay, Mr. H. E. Parks, Miss A. Bruce Walker.

Sunday, June 13. Lake Pilarcitos, San Mateo Co. Take 8:40 a.m. electric line at 5th and Market Sts., San Francisco, for Millbrae. Return from Millbrae. 12 miles. Leader, Mr. Geo. B. Furniss.

Sunday, June 27. Lagunitas and Big Carson creeks, Marin Co. *Lilium pardalinum* and Azaleas. Take 8:15 a.m. Sausalito Ferry from San Francisco to Lagunitas, returning to Fairfax. 12 miles. Leader, Miss Helen Bergfried.

MESQUITE IN KERN COUNTY.

Some years ago, Mr. J. A. Jastro, a well-known cattleman, introduced the large podded mesquite (*Prosopis glandulosa*) into the head of the San Joaquin Valley in Kern County to improve the cattle ranges. The bushes grew from seeds producing less than a dozen individuals. When these specimens fruited the cattle at once began to feed upon the pods and in this manner the mesquite was spread over a large area lying between Buena Vista Lake reservoir and Button Willow. This land is given over entirely to pasturage as much of it is alkaline and lacks facilities for irrigation.

The mesquite bushes form a pleasing contrast to the dry monotonous vegetation by their dark green appearance throughout the year. As the mesquite blooms and fruits twice each year, its crops are very valuable in holding the ranges for cattle. Cattle not only greedily eat the pods from the tree and on the ground, but also browse upon the leaves as far as they can reach. This gives the mesquite a very symmetrical and pruned appearance. As the foliage is quite dense a welcome shade is afforded stock during the summer months.

This species of mesquite has a remarkable record in the Hawaiian Islands, where it was introduced from Sonora, Mexico, and has since escaped and become well established. Over thousands of acres it forms the principal cattle feed and in the market the ground pods are sold exactly as ground barley is sold in California.

It is peculiar that mesquite should establish itself in Kern County for it is not recorded as having been found outside the influence of the summer tropical rainy season which extends over Southern Arizona to Southern Nevada and Imperial Valley. Undoubtedly a new and valuable forage plant has been introduced into the San Joaquin Valley.—W. W. Mackie.

THE BERKELEY OAKS.

The Le Conte oak on the Berkeley campus and its immediate neighbors have for a considerable number of years been the object of much concern by the University and tree lovers generally. During the present winter renewed attempts have been made to maintain the vigor of these fine trees by placing very rich soil in deep trenches dug about them and watering heavily and by adopting a spraying program for conserving the foliage against various insects. The spray program is similar to ones followed in some orchards.

In the course of digging it was found that the soil in midwinter was very dry below about one foot and evidently not in favorable condition for root functioning. Also it was found that a root here and there was killed and in advanced decay from the oak fungus, *Armillaria mellea*. A typical case was a root about three inches in diameter of the fine tree south of the path and opposite the Le Conte oak. This root was followed from a point about twenty feet southeast of

the tree to about eight feet from the tree, where infection ended. The point of original infection was not discernible but it was probably midway in the part examined, since decay was most advanced there. Surface indications of the fungus are occasional rhizomorphs, delicate rusty tufts of mycelium two to four millimeters long, and some blackish material in cracks, suggesting a slight oozing at the time of invasion of the bark. When cut into, the large, creamy plaques of mycelium show in and under the bark and the wood shows a white decay progressing from the surface inward. The fungus evidently progresses along the root readily, though rather slowly, but crossing from one root to another in the oak is difficult.

This situation suggests that it may be feasible to uncover all the roots of large trees and remove all the infected roots so that the fungus would be prevented from reaching the crown and girdling the tree as has occurred with several oaks on the campus of the University. The results secured from the thorough treatment of the campus oaks will be watched with much interest.—W. T. Horne.

LIST OF NEW MEMBERS.

The following have been elected by the Council of the Society to membership during the period from April, 1919, to April, 1920. Miss Ruth A. Forsyth, Oakland; Miss Florence B. Stanton, Berkeley; Mr. G. W. Purdy, Stockton; Prof. C. S. Shattuck, Idaho Falls; Miss Fay Chalmers, Oakland; Mr. I. M. Johnston, Berkeley; Mrs. Jos. Clemens, Pacific Grove; Prof. E. W. Holway, Univ. of Minn.; Dr. J. W. Blankinship, Berkeley; Mr. Harold E. Parks, San Jose; Dr. Mary Jones Mentzer, San Francisco; Dr. L. R. Abrams, Stanford Univ.; Mrs. Ernestine Arthur, San Francisco; Mr. J. L. Collins, Univ. of Cal.; Miss Celia B. Cook, Ventura; Mr. Joseph A. Dowdell, Univ. of Cal.; Dr. Josephine Jewett, Berkeley; Mrs. M. Neugass, Berkeley; Miss Almeda H. Nordyke, Selma; Mrs. E. C. Pitcher, Haywards; Mrs. Rose S. Williams, Berkeley; Miss Eleanor Benedek, Berkeley; Mr. Milo S. Baker, Kenwood; Dr. H. J. Webber, Univ. of Cal.; Mr. Russell W. Beeson, Berkeley; Dr. Ruth V. Allen, Berkeley; Mr. Lewis Y. Leonard, Berkeley; Mrs. S. L. Hanscom, San Francisco; Mr. and Mrs. C. R. Stillinger, Berkeley; Mrs. Jessie Lamont, Berkeley; Mrs. L. K. Ribley, Richmond; Mr. J. W. Stacey, San Francisco; Mr. A. J. Soares, Haywards; Mr. Thos. W. Cook, San Francisco; Miss Freida B. Huges, Oakland; Mrs. Harriet Smith, Oakland; Mrs. Mary L. Burrey, Ukiah; Mr. and Mrs. W. F. Bailey, Oakland; Miss Dolly Lutjeharms, Univ. of Cal.; Miss Mildred Crane, Berkeley; Miss Elizabeth Burnell, San Francisco; Dr. J. P. Bennett, Univ. of Cal.; Miss Nellie Buckner, El Cerito; Mrs. Carlotta Case Hall, Berkeley; Miss Dortha Gorter, Univ. of Cal.; Miss Mabel Symmes, Berkeley.

THE EDEN OF JOHN HILL.

The University of California Library has been presented by Mrs. James B. Smith of Burlingame with a fine copy of that rare work, the Eden of John Hill [London, 1757]. The dedication of the work is here transcribed.

To the Right Honourable The Earl of Bute.
My Lord,

He cannot fear the Censure of the World, who may address to your Lordship's most distinguished Name his Labours in a Science which has received so great Improvement from your own Regard; nor will Malice dare to throw out her ineffectual Poison against those Endeavours which have been honoured with your Approbation.

Botany, one of the most useful among the Sciences, and of all the most delightful, had lain through many Ages restrained in narrow Limits, and buried under artless Methods. Of late the Additions exceed by many Times the original Stock: America has furnished us with a Number of Plants, larger than all the Grecian Studies knew; and the great Swede has made advances towards Perfection in the Science, such as perhaps no age has seen in any other.

What we have owed to your Lordship's Attention in adorning our Kingdom with these foreign Elegancies, all know who have heard the Name of modern Botany; but none can say how much the Science itself may stand indebted for farther Improvements to that free Patronage you are pleased to give to all who cultivate true Knowledge.

Perhaps it is not too much to hope, that under such Auspices the Subject will be pursued successfully, till not a Flower of the East or Western World shall be wanting in our Gardens; till the Science, traced in Nature only,

Paulatim vitia atque Errores exuit omnes:
and the Glory of having raised it to that Perfection, shall be given to Britain; and more immediately to your Lordship's Patronage and Example.

I have the Honour to be with the highest Regard,
My Lord, Your Lordship's Most Obedient, and most humble Servant,

JOHN HILL.

St. James's Street,
Nov. 5, 1757.

Annual dues \$1.00 are due and payable. Please remit to the Secretary, Miss Ehlers, 2613 Durant Ave., Berkeley.